**Progress Report on the Oregon Coastal Ocean Observing System (OrCOOS)**
Reporting Period: January 1 to June 30, 2007
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OrCOOS Director: John A. Barth, COAS/OSU
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Major accomplishments of the OrCOOS project during its first twelve months of funding were:

- Hired a full-time Coordinator, Mr. Craig Risien, who is responsible for a) creation and maintenance of the OrCOOS web page, b) near real-time data quality control and web posting of data products, and c) interacting with ocean users to design ocean products.
- Created and maintained the OrCOOS web page: http://www.orcoos.org.
- Installed and maintained a multi-parameter oceanographic mooring 10 nautical miles offshore of Newport, Oregon, at a depth of 80 m.
- Worked with NDBC to make OrCOOS buoy data available via the NDBC web page
- Attended a meeting of the Scientist and Fishermen Exchange (SAFE) on October 24, 2006, to brief the group on OrCOOS activities.
- OrCOOS Director Jack Barth briefed a variety of groups on the emergence of hypoxia and its impacts on the Oregon continental shelf. These included the Pacific States Marine Fisheries Commission (Aug 22, 2006), the Oregon Ocean Policy Advisory Council (Aug 24, 2006), the Depoe Bay Nearshore Action Team (Oct 12, 2006), the Heceta Head Conference (Oct 28, 2006) and the Oregon Academy of Science (February 24, 2007).
- Attended a meeting of the Scientist and Fishermen Exchange (SAFE) on March 13, 2007.
- Attended an Oregon Sea Grant sponsored workshop that focused on the long-term marine research and information needs of the Oregon coast on May 2, 2007. The output from this workshop will be incorporated into a plan that assesses the long-term marine research and information needs of the US west coast.
- Registered the OrCOOS buoy on the IOOS Regional Observation Registry
- OrCOOS Director Jack Barth delivered a presentation, entitled “Autonomous underwater glider observations off central Oregon and the Oregon Coastal Ocean Observing System (OrCOOS)”, to attendees of the Coastal Zone 2007 conference (July 25, 2007).
- Attended a Cooperative Research on Oregon Ocean Salmon Project (ProjectCROOS) update and planning meeting on May 25, 2007 to discuss the sharing of data on the Oregon coastal ocean and coordinate web serving of that data.
- Began working with the Oregon State University Wave Energy team to coordinate the deployment of a Directional Waverider buoy and facilitate the flow of near real-time wave information that will be displayed on the OrCOOS web page.
- Worked with PI’s from Oregon State University, Oregon Institute of Marine Biology (OIMB), South Slough National Estuarine Research Reserve (SSNERR), the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO), and NOAA to coordinate hypoxia research off the Pacific Northwest coast.

A brief update on our proposed first year activities:

1. Develop a management plan and structure for OrCOOS

   Given the modest first-year budget for OrCOOS, we have continued to operate OrCOOS exclusively with COAS, OSU. The OrCOOS Director consults both with the OrCOOS PI and with OrCOOS investigators to plan OrCOOS activities. Dr. Murray Levine reports plans and progress on the NH-10 mooring to the OrCOOS Director. Mr. Craig Risien, OrCOOS Coordinator, reports to the OrCOOS Director and interacts nearly daily with OrCOOS investigators. Drs. Kurapov, Samelson and Erofeeva coordinate the presentation of ocean circulation model output with Mr. Craig Risien for posting on the OrCOOS web site. We have communicated with other potential Oregon partners in OrCOOS, hoping that we might be able to extend support to their activities, but this effort has not completed pending uncertainty in future OrCOOS funding.
2. Upgrade telecommunications and network infrastructure to facilitate the flow of data into OrCOOS and the subsequent output of user products

   The COAS networking infrastructure has started a significant upgrade which will greatly enhance the capabilities available to OrCOOS. Funds were used to acquire the network switches as described in the proposal. This infrastructure will provide enhanced data security for real-time sensors and data bases that are at the heart of OrCOOS. Moreover, the new infrastructure will eventually accommodate a wide array of services to enhance collaboration between the OrCOOS partners.
3. Enhance the use of existing land-based coastal radar data into readily accessible formats

   Archived daily composite surface current fields, derived from coastal radar measurements, are now available in ASCII format from http://bragg.coas.oregonstate.edu/.
4. Work to verify the skill of a preliminary ocean circulation model forecast

   Ocean circulation model forecasts have been placed on our OrCOOS web site. An undergraduate student, Daniel Fulton, from the NSF-funded COAS/Hatfield Marine Science Center Research Experience for Undergraduates (REU) is currently working with Drs. Kurapov, Samelson and Erofeeva in an effort to evaluate model forecasts using OrCOOS mooring data and NSF-supported cross-shelf glider transect data.
5. Deploy a mid-shelf oceanographic mooring off the central Oregon coast capable of telemetering data to shore in near real-time

   We have accomplished this goal, including making the data available via NDBC. Over the past year the mooring has successfully been serviced and redeployed 3 times. The mooring is currently being serviced and will be redeployed on August 14, 2007.
6. Contribute to ocean research and education

   Physical oceanography graduate student, Tristan Peery, is currently comparing OrCOOS mooring data with OSU Slocum Glider data in an effort to ground truth these AUV data. In addition, REU student Daniel Fulton is using glider and OrCOOS mooring data to evaluate ocean circulation model output, see 4 above.
7. Continue involvement in the Northwest Association of Networked Ocean Observing Systems regional association and IOOS

   We have held conversations with the NANOOS Pilot Study data management team about setting up the OrCOOS site to be compatible with the NANOOS effort. We have also participated in NANOOS planning, culminating in the submission of a NANOOS

proposal to the recent call for expanded regional association observing. This proposal was funded to the value of $1.5 million for FY'08.

All OSU financial reports on this grant are up-to-date.